

### ABSTRACT OF THE DISCLOSURE

A permanent magnet for a motor has magnetic domains magnetized in a radial direction and arranged at regular intervals in a circumferential direction. A thickness  $t$  in the radial direction of the permanent magnet satisfies the relation of  $t \leq \pi D / (NM - \pi)$ , where  $D$  represents an inner diameter of the permanent magnet having a value of 20 mm or less,  $N$  represents the number of the magnetic domains, and  $M$  represents the number of alternating current phases for driving the motor.